10/613,762
(SPECIE SEARCH)

FILE 'HOME' ENTERED AT 15:58:45 ON 26 JAN 2007

=> **file registry**

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 15:59:02 ON 26 JAN 2007
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 25 JAN 2007 HIGHEST RN 918475-45-3
DICTIONARY FILE UPDATES: 25 JAN 2007 HIGHEST RN 918475-45-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

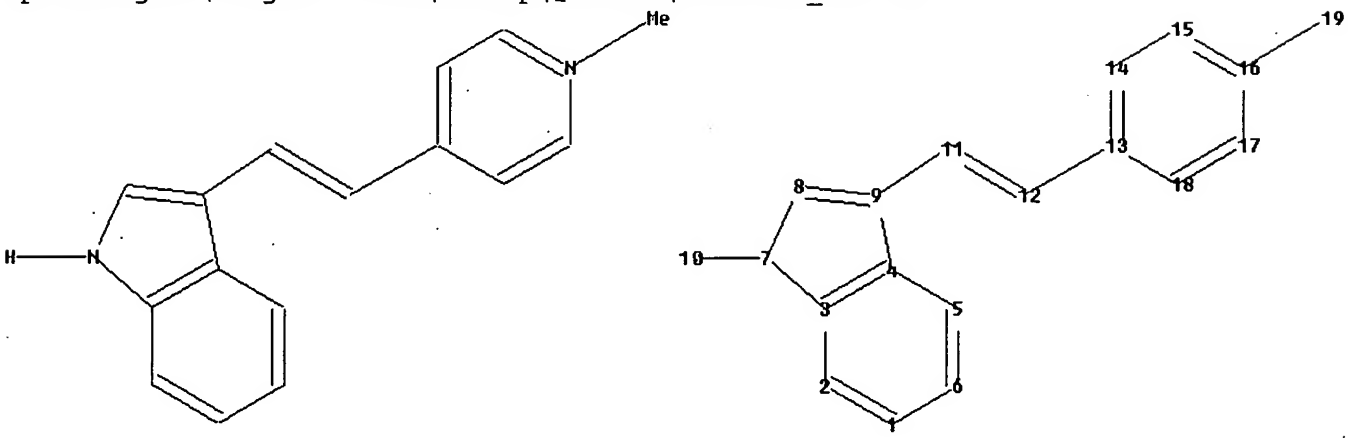
TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10613762_str.str



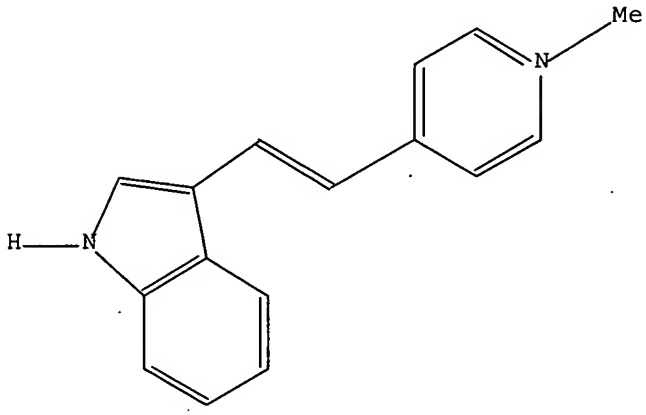
chain nodes :
10 11 12 19
ring nodes :
1 2 3 4 5 6 7 8 9 13 14 15 16 17 18
chain bonds :
7-10 9-11 11-12 12-13 16-19
ring bonds :
1-2 1-6 2-3 3-4 3-7 4-5 4-9 5-6 7-8 8-9 13-14 13-18 14-15 15-16 16-17 17-18
exact/norm bonds :

3-7 4-9 7-8 8-9
exact bonds :
7-10 9-11 11-12 12-13 16-19
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 13-14 13-18 14-15 15-16 16-17 17-18

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS 12:CLASS 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:CLASS

L1 STRUCTURE UPLOADED

=> **d l1**
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> **s l1**
SAMPLE SEARCH INITIATED 15:59:20 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 50 TO ITERATE

100.0% PROCESSED 50 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 576 TO 1424
PROJECTED ANSWERS: 2 TO 124

L2 2 SEA SSS SAM L1

=> **s l1 full**
FULL SEARCH INITIATED 15:59:24 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 905 TO ITERATE

100.0% PROCESSED 905 ITERATIONS 27 ANSWERS

SEARCH TIME: 00.00.01

L3 27 SEA SSS FUL L1

=> **file medline, caplus, wpids, uspatfull**
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 172.10 172.31

FILE 'MEDLINE' ENTERED AT 15:59:33 ON 26 JAN 2007

FILE 'CAPLUS' ENTERED AT 15:59:33 ON 26 JAN 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE 'WPIDS' ENTERED AT 15:59:33 ON 26 JAN 2007

FILE 'USPATFULL' ENTERED AT 15:59:33 ON 26 JAN 2007

=> s l3
SAMPLE SEARCH INITIATED 15:59:38 FILE 'WPIDS'
SAMPLE SCREEN SEARCH COMPLETED - 1 TO ITERATE

100.0% PROCESSED 1 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 1 TO 40
PROJECTED ANSWERS: 0 TO 0

L4 58 L3

=> **s l4 not py>2001**
L5 16 L4 NOT PY>2001

=> **d l5 1-16 ibib, abs, hitstr**

L5 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:826093 CAPLUS Full-text
DOCUMENT NUMBER: 136:61809
TITLE: Indole- and carbazole-substituted pyridinium iodide salts: a rare case of conformational isomerism in crystals
AUTHOR(S): Wang, Zheng; Nesterov, Vladimir N.; Borbulevych, Oleg Ya.; Clark, Ronald D.; Antipin, Mikhail Yu.; Timofeeva, Tatiana V.
CORPORATE SOURCE: Department of Chemistry, New Mexico Highlands University, Las Vegas, NM, 87701, USA
SOURCE: Acta Crystallographica, Section C: Crystal Structure Communications (2001), C57(11), 1343-1348
CODEN: ACSCEE; ISSN: 0108-2701
PUBLISHER: Munksgaard International Publishers Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Indole- and carbazole-substituted pyridinium iodide salts were synthesized and characterized. X-ray anal. revealed that the iodide salt of the indole-

substituted cation (E)-4-(1H-indol-3-ylvinyl)-N-methylpyridinium (IMPE+), C16H15N2+·I-, (I), has two polymorphic modifications, (Ia) and (Ib), and a hemihydrate structure, C16H15N2+·I-·0.5H2O, (II). Until now, only one crystal modification was identified for the (E)-4-(9-ethyl-9H-carbazol-3-ylvinyl)-N-methylpyridinium (ECMPE+) iodide salt, C22H21N2+·I-, (III). Crystals of (Ia) and (Ib) comprise stacks of antiparallel cations with iodide anions located in the channels between the stacks. Due to the presence of the H2O mols., the packing in (II) is quite different to that found in (Ia) and (Ib), and positional disorder involving a statistical superposition of two rotamers of IMPE+, with different orientations of the indole fragment, was found. Crystals of (III) contain two independent ECMPE+ rotamers with different orientations of their carbazole substituents. The cations are packed in stacks, with the iodide anions located in the channels between the stacks. In (III), the iodide is disordered over two sites, with occupancies of 0.83 and 0.17. Crystallog. data are given.

IT 382591-35-7
RL: PRP (Properties)
(crystal structure of)

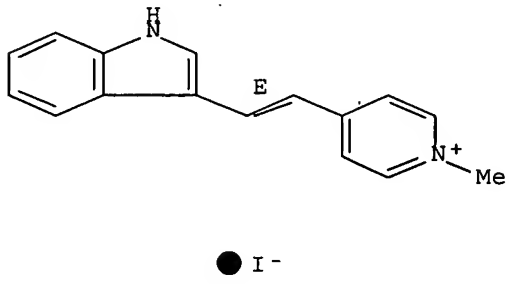
RN 382591-35-7 CAPLUS

CN Pyridinium, 4-[(1E)-2-(1H-indol-3-yl)ethenyl]-1-methyl-, iodide, hydrate (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 36098-33-6
CMF C16 H15 N2 . I

Double bond geometry as shown.

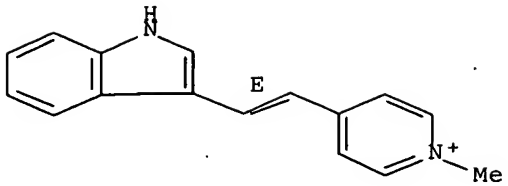


IT 36098-33-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure of polymorphs of)

RN 36098-33-6 CAPLUS

CN Pyridinium, 4-[(1E)-2-(1H-indol-3-yl)ethenyl]-1-methyl-, iodide (9CI) (CA INDEX NAME)

Double bond geometry as shown.



● I-

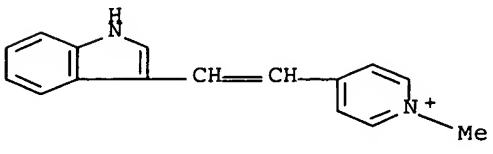
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN ?
ACCESSION NUMBER: 1999:332021 CAPLUS Full-text
DOCUMENT NUMBER: 131:96967
TITLE: Substituted 2- and 4-[2-(3-indolyl)ethenyl]pyridinium salts as inhibitors of MAO-B. Quantitative modeling of the structure-activity relationship
AUTHOR(S): Bachurin, S. O.; Fetison, V. I.; Afanas'ev, A. Z.; Afanas'eva, S. V.; Dubova, L. G.; Yankovskaya, V. L.; Mukhina, T. V.
CORPORATE SOURCE: Inst. Fiziol. Aktivnykh Veshchestv, Ross. Akad. Nauk, Chernogolovka, Russia
SOURCE: Doklady Akademii Nauk (1999), 364(6), 782-785
CODEN: DAKNEQ; ISSN: 0869-5652
PUBLISHER: MAIK Nauka
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB Synthesis of 21 monoamineoxidase B inhibitors is reported. The modeling data demonstrate that combination of hydrophobic, polar, and steric factors dets. the degree of the enzyme inhibition.

IT 26608-75-3P 231954-87-3P 231955-03-6P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(substituted 2- and 4-[2-(3-indolyl)ethenyl]pyridinium salts as inhibitors of MAO-B: structure-activity relationship)

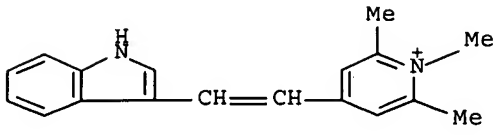
RN 26608-75-3 CAPLUS
CN Pyridinium, 4-[2-(1H-indol-3-yl)ethenyl]-1-methyl-, iodide (9CI) (CA INDEX NAME)



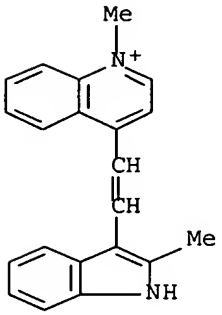
● I-

RN 231954-87-3 CAPLUS

CN Pyridinium, 4-[2-(1H-indol-3-yl)ethenyl]-1,2,6-trimethyl-, iodide (9CI) (CA INDEX NAME)



RN 231955-03-6 CAPLUS
CN Quinolinium, 1-methyl-4-[2-(2-methyl-1H-indol-3-yl)ethenyl]-, iodide (9CI) (CA INDEX NAME)



L5 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:434896 CAPLUS Full-text ?
DOCUMENT NUMBER: 125:54703
TITLE: Inhibition of dopamine reuptake system by analog of neurotoxic metabolite MPP(1-methyl-4-phenylpyridinium). Structure-activity relationships
AUTHOR(S): Bachurin, S. O.; Lukoyanov, N. V.; Petrova, L. N.; Solyakov, L. S.; Tkachenko, S. E.; Raevskii, O. A.
CORPORATE SOURCE: Institut Fiziologicheski Aktivnykh Veshchestv, Chernogolovka, Russia
SOURCE: Doklady Akademii Nauk (1996), 346(4), 549-551
CODEN: DAKNEQ; ISSN: 0869-5652
PUBLISHER: MAIK Nauka
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB The quant. structure-activity anal. (QSAR) was carried out for 41 potential inhibitors of dopamine (I) reuptake of the series of 1-methyl-4-phenyl-1,2,3,4-tetrahydropyridine, 1-methyl-4-phenylpyridine, and stilbazole analogs. The structure-activity correlation equations were developed. QSAR demonstrated that the charge on the N atom of the pyridine cycle and hydrophilic substituents enhanced the inhibiting ability of the compds., while

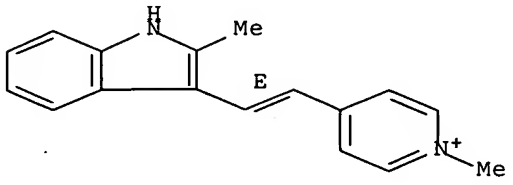
the substituents more electroneg. than the N atom of the pyridine cycle caused a decrease in the affinity of the compds. to a I carrier.

IT 177997-46-5
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(QSAR study of inhibition of dopamine reuptake system by methylphenylpyridine analogs)

RN 177997-46-5 CAPLUS

CN Pyridinium, 1-methyl-4-[2-(2-methyl-1H-indol-3-yl)ethenyl]-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L5 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1988:159032 CAPLUS Full-text

DOCUMENT NUMBER: 108:159032

TITLE: Photolithographic material containing contrast-enhancing layer

INVENTOR(S): Ichimura, Kunihiro; Yonezawa, Teruhiko; Kikuchi, Hideo; Tochizawa, Nariaki; Hayashi, Keiichi

PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan; Toyo Gosei Kogyo Co., Ltd.

SOURCE: Eur. Pat. Appl., 31 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 246885	A2	19871125	EP 1987-304498	19870520
EP 246885	A3	19880622		
R: DE, FR, GB				
JP 63100440	A	19880502	JP 1987-35781	19870220
JP 2592447	B2	19970319		
JP 63100441	A	19880502	JP 1987-35782	19870220
JP 2592448	B2	19970319		
US 4925770	A	19900515	US 1988-284251	19881214

PRIORITY APPLN. INFO.: JP 1986-113508 A 19860520
JP 1986-138144 A 19860616
US 1987-47187 B2 19870506

GI For diagram(s), see printed CA Issue.

AB A contrast-enhancing layer for a photolithog. material for formation of a patterned image (i.e., a resist image) by the light-projection method is comprised of a photobleachable compound having the structural unit represented by the formula I (Z = a divalent group which forms a heterocyclic aromatic ring structure with the N atom; X- = a monovalent anion; n = a pos. integer)

and a water-soluble polymer binder. Thus, a Si wafer was coated with a pos.-working photoresist composition (Microposit 1400-27), dried, overcoated with an aqueous solution containing II (a photobleachable compound) and pullulan, dried, exposed to UV (365 nm) radiation through a wafer stepper, and developed to give a line-and-space pattern (0.5 μm width) with clear resolution

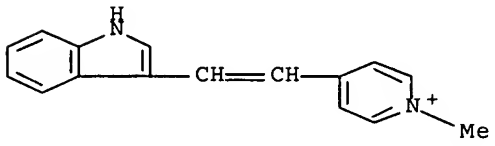
IT 113657-73-1
RL: USES (Uses)
(photobleachable contrast-enhancing layers containing, for photoresists)

RN 113657-73-1 CAPLUS

CN Pyridinium, 4-[2-(1H-indol-3-yl)ethenyl]-1-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 113657-72-0
CMF C16 H15 N2



CM 2

CRN 21228-90-0
CMF C H3 O4 S

Me—O—SO3-

L5 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1981:103639 CAPLUS Full-text

DOCUMENT NUMBER: 94:103639

TITLE: Isolation and synthesis of 5-ethyl-2-methyl-11H-pyrido[3,4-a]carbazolium hydroxide, a new indole alkaloid type from Aspidosperma gilbertii

AUTHOR(S): Miranda, Edson Conde; Brieskorn, Carl Heinz; Blechert, Siegfried

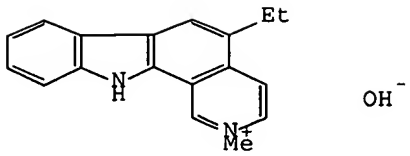
CORPORATE SOURCE: Inst. Pharm. Lebensmittelchem., Univ. Wuerzburg, Wuerzburg, D-8700, Fed. Rep. Ger.

SOURCE: Chemische Berichte (1980), 113(10), 3245-8
CODEN: CHBEAM; ISSN: 0009-2940

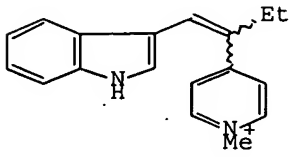
DOCUMENT TYPE: Journal

LANGUAGE: German

GI



I



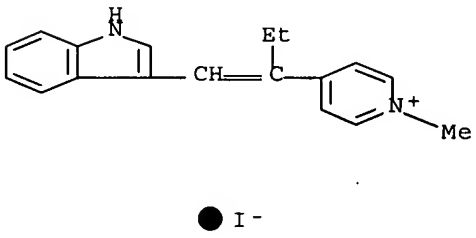
II

AB The indole alkaloid I was isolated from the bark of Aspidosperma gilbertii. I was synthesized by reaction of 3-indolecarboxaldehyde with 1-methyl-4-propylpyridinium iodide to give II, which underwent photochem cyclization.

IT 76787-85-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and photochem. cyclization of pyridocarbazol derivs. from)

RN 76787-85-4 CAPLUS

CN Pyridinium, 4-[1-(1H-indol-3-ylmethylene)propyl]-1-methyl-, iodide (9CI) (CA INDEX NAME)



L5 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1981:64937 CAPLUS Full-text

DOCUMENT NUMBER: 94:64937

TITLE: Vinylogous anhydro bases of pyridylindoles

AUTHOR(S): Stupnikova, T. V.; Kalafat, V. N.; Klyuev, N. A.; Marshtupa, V. P.; Sagitullin, R. S.

CORPORATE SOURCE: Donetsk. Gos. Univ., Donetsk, USSR

SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1980), (10), 1360-4
CODEN: KGSSAQ; ISSN: 0453-8234

DOCUMENT TYPE: Journal

LANGUAGE: Russian

GI

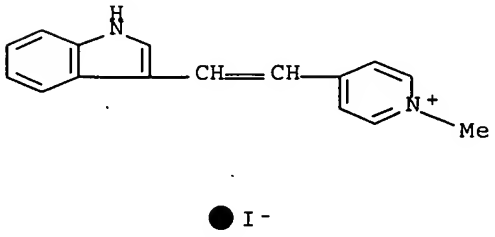
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Treatment of I (R = Me, hexyl, dodecyl), II, and III with OH- gave IV (same R), V, and VI, resp., with little or no dealkylation. The pKa values of IV-VI were 10.00-11.17; protonation by HI occurred on the indolenine N atom to give the starting iodides. Alkylation and benzoylation of IV-VI also occurred on the indolenine N atom. IR, electronic, and mass spectral data were given for the anhydro bases.

IT 26608-75-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydroxide)

RN 26608-75-3 CAPLUS

CN Pyridinium, 4-[2-(1H-indol-3-yl)ethenyl]-1-methyl-, iodide (9CI) (CA INDEX NAME)



L5 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1977:603333 CAPLUS Full-text
DOCUMENT NUMBER: 87:203333
TITLE: Dyeing paper material
INVENTOR(S): Moeckli, Peter
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
SOURCE: Ger. Offen., 23 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2711521	A1	19770929	DE 1977-2711521	19770316
DE 2711521	C3	19790201		
CH 601558	A5	19780714	CH 1976-3405	19760318
US 4089647	A	19780516	US 1977-767591	19770210
FI 7700795	A	19770919	FI 1977-795	19770314
FI 58532	B	19801031		
FI 58532	C	19810210		
FR 2344673	A1	19771014	FR 1977-7910	19770316
FR 2344673	B1	19800425		
CA 1107462	A1	19810825	CA 1977-274079	19770316
BE 852553	A1	19770919	BE 1977-175853	19770317
SE 7703056	A	19770919	SE 1977-3056	19770317
SE 421077	B	19811123		
SE 421077	C	19820304		
BR 7701652	A	19780103	BR 1977-1652	19770317
ES 456952	A1	19780116	ES 1977-456952	19770317
ZA 7701618	A	19780222	ZA 1977-1618	19770317

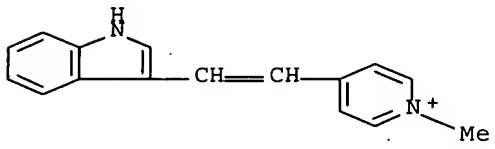
AU 7723350	A	19780921	AU 1977-23350		19770317
GB 1571927	A	19800723	GB 1977-11463		19770317
JP 54005002	B	19790313	JP 1977-29359		19770318
PRIORITY APPLN. INFO.:			CH 1976-3405	A	19760318

AB Addition of aqueous solns. of (indolylvinyl)-N-methylpyridinium chlorides to waste paper pulps gave colored papers. Thus, 50 g waste paper in 1 L H2O was beaten to obtain a fiber suspension, diluted with 1 L H2O, treated with 1 g 20% aqueous 1-methyl-2-[(2-methyl-1-H-indol-3-yl)vinyl]pyridinium chloride [64651-41-8] solution, diluted with H2O to 0.5% consistency, formed into paper web, and dried for 5 min at 100° to give waterproof, bright yellow wrapping paper.

IT 64651-39-4P
RL: PREP (Preparation)
(dye for paper, manufacture of)

RN 64651-39-4 CAPLUS

CN Pyridinium, 4-[2-(1H-indol-3-yl)ethenyl]-1-methyl-, chloride (9CI) (CA INDEX NAME)



L5 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN ?

ACCESSION NUMBER: 1972:69480 CAPLUS Full-text

DOCUMENT NUMBER: 76:69480

TITLE: Inhibitors of choline acetyltransferase

AUTHOR(S): Cavallito, C. J.; White, Helen Lyong; Yun, H. S.

CORPORATE SOURCE: Sch. Pharm., Univ. North Carolina, Chapel Hill, NC, USA

SOURCE: Drugs Cholinergic Mech. CNS (Cent. Nerv. Syst.), Proc. Conf. (1970), 97-116. Editor(s): Heilbronn, Edith. Foersvarets Forskningsanst.: Stockholm, Swed. CODEN: 24HKAN

DOCUMENT TYPE: Conference

LANGUAGE: English

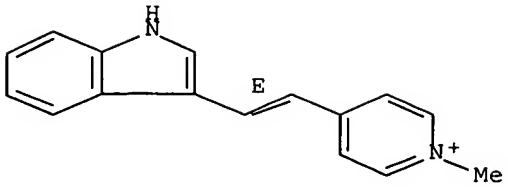
AB Choline acetyltransferase (ChAc) inhibitors were investigated. Results indicated that styrylpyridine derivs. and analogs are effective inhibitors. The structural and electronic features of the inhibitors are discussed. The inhibitors appear to block the transfer of acetyl from the acetyl CoA-ChAc complex to choline.

IT 36098-33-6
RL: BIOL (Biological study)
(choline acetyltransferase inhibition by)

RN 36098-33-6 CAPLUS

CN Pyridinium, 4-[(1E)-2-(1H-indol-3-yl)ethenyl]-1-methyl-, iodide (9CI) (CA INDEX NAME)

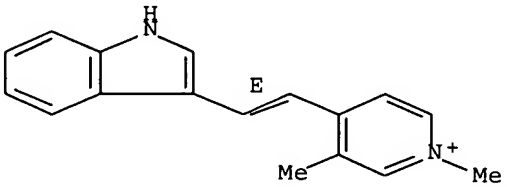
Double bond geometry as shown.



● I⁻

L5 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1970:505755 CAPLUS Full-text
DOCUMENT NUMBER: 73:105755
TITLE: Choline acetyltransferase inhibitors. Physicochemical properties in relation to inhibitory activity of styrylpyridine analogs
AUTHOR(S): Allen, Richard Charles; Carlson, Gerald L.; Cavallito, C. J.
CORPORATE SOURCE: Sch. of Pharm., Univ. of North Carolina, Chapel Hill, NC, USA
SOURCE: Journal of Medicinal Chemistry (1970), 13(5), 909-12
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Hueckel MO and Hansch calcns. were performed on various styrylpyridine derivs., some of which are potent inhibitors of choline acetyltransferase. These compds. apparently bind the enzyme by hydrophobic and π donor contributions of the aryl moiety, and π acceptor interactions, presumably by the pyridinium-like portion.
IT 29714-15-6
RL: PRP (Properties)
(mol. orbitals of, choline acetyltransferase inhibition in relation to)
RN 29714-15-6 CAPLUS
CN Pyridinium, 4-[(1E)-2-(1H-indol-3-yl)ethenyl]-1,3-dimethyl-, iodide (9CI) (CA INDEX NAME)

Double bond geometry as shown.



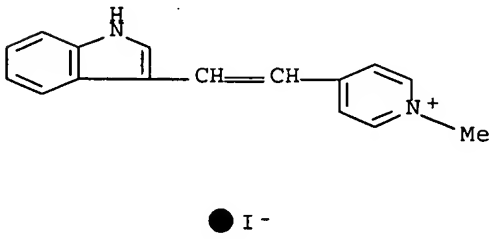
● I⁻

L5 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1970:107348 CAPLUS Full-text

DOCUMENT NUMBER: 72:107348
TITLE: Choline acetyltransferase inhibitors. Dimensional and substituent effects among styrylpyridine analogs
AUTHOR(S): Cavallito, Chester J.; Yun, H. S.; Kaplan, T.; Smith, John Crispin; Foldes, Francis F.
CORPORATE SOURCE: Sch. of Pharm., Univ. of North Carolina, Chapel Hill, NC, USA
SOURCE: Journal of Medicinal Chemistry (1970), 13(2), 221-4
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Among styrylpyridine analogs, choline acetylase (ChA) inhibitory potency is diminished by highly electroneg. substituents (CN, NO2) on the 3- or 4-position of the phenyl ring but is enhanced by halogens (Cl, Br) less electroneg. than F. Substituents inducing deviation from coplanarity of the 2 ring systems are unfavorable for inhibitory activity. 3-Methyl substitution on the pyridine ring enhances potency. The nature of the pyrido-N-attached quaternizing group is noncritical and a hydrophilic substituent can provide potent, more water-soluble, derivs. A naphthyl vinyl-quinoline system provides a high order of potency, but the same mass distributed as in phenanthrylvinylpyridine is unfavorable. ChA inhibitory activity among these compds. seems favored by thin flat mols., one end of which tends to have π-electron-excessive, the other end π-electron-deficient, characteristics separated by a conjugating exocyclic bond. The photolability of some of these compds. in solution requires appropriate precautionary measures in their evaluation.

IT 26608-75-3
RL: BIOL (Biological study)
(choline acetyltransferase inhibition by)
RN 26608-75-3 CAPLUS
CN Pyridinium, 4-[2-(1H-indol-3-yl)ethenyl]-1-methyl-, iodide (9CI) (CA INDEX NAME)



L5 ANSWER 11 OF 16 USPATFULL on STN
ACCESSION NUMBER: 2001:66940 USPATFULL Full-text
TITLE: Oxidation dyeing composition for keratin fibres and dyeing method using said composition
INVENTOR(S): de la Mettrie, Roland, Le Vesinet, France
Cotteret, Jean, Verneuil-sur-Seine, France
de Labbey, Arnaud, Aulnay Sous Bois, France
Maubru, Mireille, Chatou, France
PATENT ASSIGNEE(S): L'Oreal S.A., Paris, France (non-U.S. corporation)

NUMBER	KIND	DATE

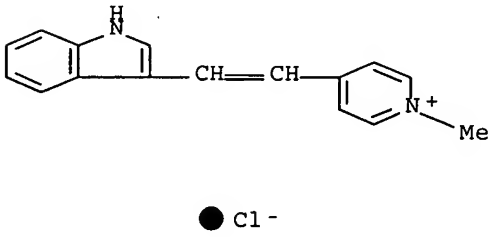
PATENT INFORMATION:	US 6228129	B1	20010508	
	WO 9917730		19990415	
APPLICATION INFO.:	US 1999-319166		19990701	(9)
	WO 1998-FR2075		19980928	
			19990701	PCT 371 date
			19990701	PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	FR 1997-12353	19971003

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Liott, Caroline D.
LEGAL REPRESENTATIVE: Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.
NUMBER OF CLAIMS: 52
EXEMPLARY CLAIM: 1
LINE COUNT: 1560
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a ready-to-use composition for the oxidation dyeing of keratin fibers, and in particular human keratin fibers such as the hair, comprising, in a medium which is suitable for dyeing, at least one oxidation base, at least one cationic direct dye and at least one enzyme of 2-electron oxidoreductase type in the presence of at least one donor for the said enzyme, and to the dyeing process using this composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 64651-39-4
(oxidative hair dye compns. containing oxidoreductase-type enzymes, oxidation
bases, and direct cationic dyes)
RN 64651-39-4 USPATFULL
CN Pyridinium, 4-[2-(1H-indol-3-yl)ethenyl]-1-methyl-, chloride (9CI) (CA INDEX NAME)



L5 ANSWER 12 OF 16 USPATFULL on STN

ACCESSION NUMBER:	1999:162994 USPATFULL Full-text
TITLE:	Compositions and processes for dyeing keratin fibers with cationic direct dyes, oxidation bases, and oxidizing agents
INVENTOR(S):	Rondeau, Christine, Sartrouville, France Cotteret, Jean, Verneuil Sur Seine, France De La Mettrie, Roland, Le Vesinet, France
PATENT ASSIGNEE(S):	L'Oreal, Paris, France (non-U.S. corporation)

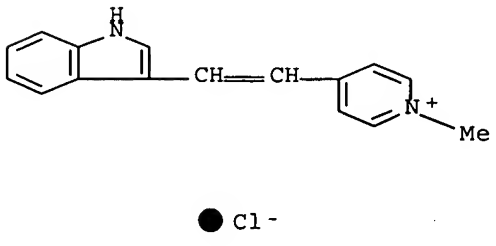
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6001135		19991214
APPLICATION INFO.:	US 1997-994444		19971219 (8)

	NUMBER	DATE
PRIORITY INFORMATION:	FR 1996-15895	19961223

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Liott, Caroline D.
LEGAL REPRESENTATIVE: Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.
NUMBER OF CLAIMS: 41
EXEMPLARY CLAIM: 1
LINE COUNT: 823
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A ready-to-use composition for the oxidation dyeing of keratin fibers, in particular human keratin fibers such as the hair, this ready-to-use composition comprising at least one oxidation base in combination with at least one selected cationic direct dye and at least one oxidizing agent, as well as to the dyeing process using this ready-to-use composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 64651-39-4
(cationic direct colorant; oxidative hair dye compns. containing cationic direct colorants with good coloration, shine, and shampoo resistance)
RN 64651-39-4 USPATFULL
CN Pyridinium, 4-[2-(1H-indol-3-yl)ethenyl]-1-methyl-, chloride (9CI) (CA INDEX NAME)



L5 ANSWER 13 OF 16 USPATFULL on STN
ACCESSION NUMBER: 1999:154874 USPATFULL Full-text
TITLE: Composition for the oxidation dyeing of keratin fibers containing a cationic direct dye and dyeing process using this composition
INVENTOR(S): Rondeau, Christine, Sartrouville, France
Cotteret, Jean, Verneuil Sur Seine, France
de la Mettrie, Roland, le Vesinet, France
PATENT ASSIGNEE(S): L'Oreal, France (non-U.S. corporation)

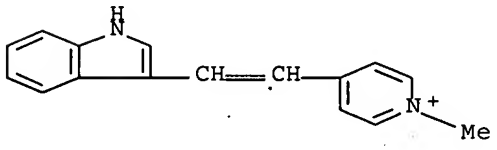
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5993490		19991130
APPLICATION INFO.:	US 1997-994130		19971219 (8)

	NUMBER	DATE
PRIORITY INFORMATION:	FR 1996-15891	19961223

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Liott, Caroline D.
LEGAL REPRESENTATIVE: Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.
NUMBER OF CLAIMS: 41
EXEMPLARY CLAIM: 1
LINE COUNT: 768
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A ready-to-use composition for the oxidation dyeing of keratin fibers, in particular human keratin fibers such as the hair, comprising at least one oxidation base selected from para-phenylenediamines and bis(phenyl)alkylenediamines, in combination with at least one coupler selected from meta-diphenols, at least one selected cationic direct dye and at least one oxidizing agent, as well as to the dyeing process using this composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 64651-39-4
(cationic direct dye; oxidative hair dye compns. with good coloration and shampoo resistance)
RN 64651-39-4 USPATFULL
CN Pyridinium, 4-[2-(1H-indol-3-yl)ethenyl]-1-methyl-, chloride (9CI) (CA INDEX NAME)



L5 ANSWER 14 OF 16 USPATFULL on STN
ACCESSION NUMBER: 1998:33383 USPATFULL Full-text
TITLE: Process for dyeing keratin-containing fibres with cationic dyes
INVENTOR(S): Mockli, Peter, Sandgrubenstrasse, Switzerland
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Corporation, Tarrytown, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5733343		19980331
APPLICATION INFO.:	US 1996-756448		19961126 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1995-392783, filed on 28 Feb 1995, now abandoned

	NUMBER	DATE

PRIORITY INFORMATION:	CH 1993-2020	19930705
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Lieberman, Paul	
ASSISTANT EXAMINER:	Dusheck, Caroline L.	
LEGAL REPRESENTATIVE:	Mansfield, Kevin T.	
NUMBER OF CLAIMS:	22	
EXEMPLARY CLAIM:	1	
LINE COUNT:	691	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

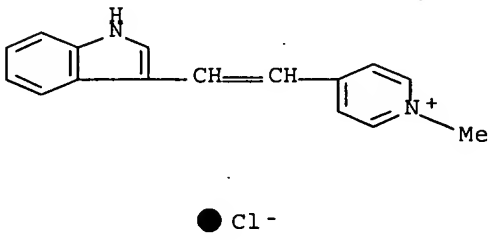
AB Keratin-containing fibres, in particular human hair, are dyed using dyes of formulae (1) to (6) indicated in claim 1. These dyes make it possible to dye by the trichromatic principle even in dark shades.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 64651-39-4
(hair dyeing prepns. containing cationic dyes)

RN 64651-39-4 USPATFULL

CN Pyridinium, 4-[2-(1H-indol-3-yl)ethenyl]-1-methyl-, chloride (9CI) (CA INDEX NAME)



L5 ANSWER 15 OF 16 USPATFULL on STN

ACCESSION NUMBER:	90:38343 USPATFULL Full-text
TITLE:	Contrast-enhancing agent for photolithography
INVENTOR(S):	Ichimura, Kunihiro, Tsukuba, Japan Yonezawa, Teruhiko, Kanagawa, Japan Kikuchi, Hideo, Chiba, Japan Tochizawa, Nariaki, Funabashi, Japan Hayashi, Keiichi, Funabashi, Japan
PATENT ASSIGNEE(S):	Director General of Agency of Industrial Science and Technology, Tokyo, Japan (non-U.S. government) Toyo Gosei Kogyo Co., Ltd., Chiba, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4925770		19900515
APPLICATION INFO.:	US 1988-284251		19881214 (7)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1987-47187, filed on 6 May 1987, now abandoned		

NUMBER	DATE

PRIORITY INFORMATION: JP 1986-113508 19860520
JP 1986-138144 19860616
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Michl, Paul R.
ASSISTANT EXAMINER: Buscher, Mark R.
LEGAL REPRESENTATIVE: Hopgood, Calimafde, Kalil, Blaustein & Judlowe
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
LINE COUNT: 972
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides a novel contrast-enhancing agent for photolithography which is used as an overcoating on a positive-working photoresist layer for enhancing the contrast of the photoresist in a low-contrast exposure to light. The composition comprises, in addition to a watersoluble polymer, e.g., poly(vinyl alcohol), poly(vinyl pyrroilidone) and pullulan, as the binder, a specific photo-bleachable organic compound having, in a molecule, at least one nitrogen-containing heterocyclic aromatic structure represented by the general formula ##STR1## in which Z is a divalent group to form the heterocyclic aromatic ring with the nitrogen atom, X is an anionic group of monovalency and n is a positive integer of, e.g., 1 or 2.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 113657-73-1
(photobleachable contrast-enhancing layers containing, for photoresists)
RN 113657-73-1 USPATFULL
CN Pyridinium, 4-[2-(1H-indol-3-yl)ethenyl]-1-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

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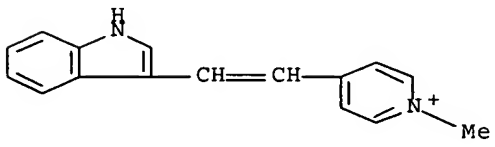
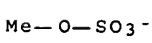
CRN 113657-72-0
CMF C16 H15 N2



CM 2

CRN 21228-90-0
CMF C H3 O4 S



L5 ANSWER 16 OF 16 USPATFULL on STN

ACCESSION NUMBER: 78:25171 USPATFULL Full-text
TITLE: Process for the dyeing of paper material
INVENTOR(S): Mockli, Peter, Basel, Switzerland
PATENT ASSIGNEE(S): Ciba-Geigy AG, Basel, Switzerland (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4089647		19780516
APPLICATION INFO.:	US 1977-767591		19770210 (5)

	NUMBER	DATE
PRIORITY INFORMATION:	CH 1976-3405	19760318

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Schofer, Joseph L.
ASSISTANT EXAMINER: Tungol, Maria S.
LEGAL REPRESENTATIVE: Roberts, Edward McC., Almaula, Probodh I.
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
LINE COUNT: 287
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

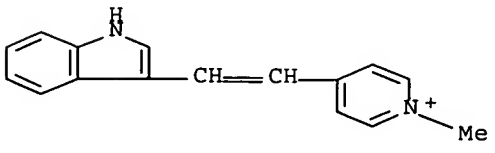
AB A process for the dyeing of paper material from an aqueous medium, comprising the use of at least one water-soluble dye of the formula ##STR1## wherein Py represents a pyridyl group of the formula ##STR2## R.sub.1 represents lower alkyl, substituted lower alkyl, allyl, or benzyl, R.sub.2 represents hydrogen, halogen, methyl or ethyl,

R.sub.3 represents hydrogen, methyl, ethyl or phenyl,

R.sub.4 represents hydrogen, lower alkyl substituted lower alkyl, or allyl, and

A.crclbar. represents an anion.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 64651-39-4P
(dye for paper, manufacture of)
RN 64651-39-4 USPATFULL
CN Pyridinium, 4-[2-(1H-indol-3-yl)ethenyl]-1-methyl-, chloride (9CI) (CA INDEX NAME)



● Cl-

=> **s l4 and "cell proliferation"**
L6 1 L4 AND "CELL PROLIFERATION"

=> **d l6 ibib, abs, hitstr**
'HITSTR' IS NOT A VALID FORMAT FOR FILE 'MEDLINE'

ENTER DISPLAY FORMAT (BIB):ibib, abs

L6 ANSWER 1 OF 1 MEDLINE on STN
ACCESSION NUMBER: 2006351356 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 16766262
TITLE: Attenuation of LDH-A expression uncovers a link between glycolysis, mitochondrial physiology, and tumor maintenance.
AUTHOR: Fantin Valeria R; St-Pierre Julie; Leder Philip
CORPORATE SOURCE: Department of Genetics, Harvard Medical School and Howard Hughes Medical Institute, Boston, Massachusetts 02115, USA.
SOURCE: Cancer cell, (2006 Jun) Vol. 9, No. 6, pp. 425-34. Journal code: 101130617. ISSN: 1535-6108.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200608
ENTRY DATE: Entered STN: 13 Jun 2006
Last Updated on STN: 10 Aug 2006
Entered Medline: 9 Aug 2006

AB Alterations in cellular metabolism are among the most consistent hallmarks of cancer. Herein we have investigated the relationship between increased aerobic lactate production and mitochondrial physiology in tumor cells. To diminish the ability of malignant cells to metabolize pyruvate to lactate, lactate dehydrogenase A (LDH-A) levels were knocked down by means of LDH-A short hairpin RNAs. Reduction in LDH-A activity resulted in stimulation of mitochondrial respiration and decrease of mitochondrial membrane potential. It also compromised the ability of these tumor cells to proliferate under hypoxia. The tumorigenicity of the LDH-A-deficient cells was severely diminished, and this phenotype was reversed by complementation with the human ortholog LDH-A protein. These results demonstrate that LDH-A plays a key role in tumor maintenance.

=> **d his**

(FILE 'HOME' ENTERED AT 15:58:45 ON 26 JAN 2007)

FILE 'REGISTRY' ENTERED AT 15:59:02 ON 26 JAN 2007
L1 STRUCTURE UPLOADED
L2 2 S L1
L3 27 S L1 FULL

FILE 'MEDLINE, CAPLUS, WPIDS, USPATFULL' ENTERED AT 15:59:33 ON 26 JAN 2007
L4 58 S L3
L5 16 S L4 NOT PY>2001
L6 1 S L4 AND "CELL PROLIFERATION"

=> **s 14 and "cancer"**
L7 3 L4 AND "CANCER"

=> **d 17 1-3 ibib, abs, hitstr**

ENTER DISPLAY FORMAT (BIB):abs, ibib

L7 ANSWER 1 OF 3 MEDLINE on STN
AB Alterations in cellular metabolism are among the most consistent hallmarks of cancer. Herein we have investigated the relationship between increased aerobic lactate production and mitochondrial physiology in tumor cells. To diminish the ability of malignant cells to metabolize pyruvate to lactate, lactate dehydrogenase A (LDH-A) levels were knocked down by means of LDH-A short hairpin RNAs. Reduction in LDH-A activity resulted in stimulation of mitochondrial respiration and decrease of mitochondrial membrane potential. It also compromised the ability of these tumor cells to proliferate under hypoxia. The tumorigenicity of the LDH-A-deficient cells was severely diminished, and this phenotype was reversed by complementation with the human ortholog LDH-A protein. These results demonstrate that LDH-A plays a key role in tumor maintenance.
ACCESSION NUMBER: 2006351356 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 16766262
TITLE: Attenuation of LDH-A expression uncovers a link between glycolysis, mitochondrial physiology, and tumor maintenance.
AUTHOR: Fantin Valeria R; St-Pierre Julie; Leder Philip
CORPORATE SOURCE: Department of Genetics, Harvard Medical School and Howard Hughes Medical Institute, Boston, Massachusetts 02115, USA.
SOURCE: Cancer cell, (2006 Jun) Vol. 9, No. 6, pp. 425-34. Journal code: 101130617. ISSN: 1535-6108.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200608
ENTRY DATE: Entered STN: 13 Jun 2006
Last Updated on STN: 10 Aug 2006
Entered Medline: 9 Aug 2006

L7 ANSWER 2 OF 3 MEDLINE on STN
AB Tumorigenesis results from events that impinge on a variety of collaborating metabolic pathways. To assess their role in this process, we utilized a cell-based assay to perform a high-throughput, chemical library screen. In so doing, we identified F16, a small molecule that selectively inhibits proliferation of mammary epithelial, neu-overexpressing cells, as well as a variety of mouse mammary tumor and human breast cancer cell lines. F16 belongs to a group of structurally similar molecules with a delocalized positive charge. The compound is accumulated in mitochondria of responsive cells, driven by the membrane potential, and it compromises their functional integrity. Mitochondrial hyperpolarization is a shared feature of many tumor cell lines, explaining the broad action spectrum of this novel delocalized lipophilic cation.
ACCESSION NUMBER: 2002401591 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 12150823
TITLE: A novel mitochondriotoxic small molecule that selectively inhibits tumor cell growth.
AUTHOR: Fantin Valeria R; Berardi Marcelo J; Scorrano Luca; Korsmeyer Stanley J; Leder Philip
CORPORATE SOURCE: Department of Genetics, Harvard Medical School, Boston,

```
                    Massachusetts 02115, USA.
SOURCE:             Cancer cell, (2002 Jul) Vol. 2, No. 1, pp. 29-42.
                    Journal code: 101130617. ISSN: 1535-6108.
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals
ENTRY MONTH:        200303
ENTRY DATE:         Entered STN: 2 Aug 2002
                    Last Updated on STN: 26 Mar 2003
                    Entered Medline: 25 Mar 2003

L7   ANSWER 3 OF 3     MEDLINE on STN
AB    Mitochondria are principal actors in apoptosis as central hubs for diverse
      apoptotic signals.  A new paper demonstrates the therapeutic potential of
      directly engaging these apoptotic pathways by identifying a mitochondrial
      toxin selective for tumor cells.
ACCESSION NUMBER:   2002401587     MEDLINE  Full-text
DOCUMENT NUMBER:    PubMed ID: 12150816
TITLE:              A mitochondrial Achilles' heel in cancer?.
AUTHOR:             Hockenbery David M
CORPORATE SOURCE:   Fred Hutchinson Cancer Research Center, Seattle, Washington
                    98109, USA.. dhockenb@fhcrc.rog
SOURCE:             Cancer cell, (2002 Jul) Vol. 2, No. 1, pp. 1-2.
                    Journal code: 101130617. ISSN: 1535-6108.
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Commentary
                    Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals
ENTRY MONTH:        200303
ENTRY DATE:         Entered STN: 2 Aug 2002
                    Last Updated on STN: 26 Mar 2003
                    Entered Medline: 25 Mar 2003


=> d his

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     FILE 'REGISTRY' ENTERED AT 15:59:02 ON 26 JAN 2007
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     FILE 'MEDLINE, CAPLUS, WPIDS, USPATFULL' ENTERED AT 15:59:33 ON 26 JAN
     2007
L4           58 S L3
L5           16 S L4 NOT PY>2001
L6            1 S L4 AND "CELL PROLIFERATION"
L7            3 S L4 AND "CANCER"

=>

---Logging off of STN---


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Executing the logoff script...
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CA SUBSCRIBER PRICE	-7.80	-7.80

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10/613,762
(GENUS SEARCH)

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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 25 JAN 2007 HIGHEST RN 918475-45-3
DICTIONARY FILE UPDATES: 25 JAN 2007 HIGHEST RN 918475-45-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

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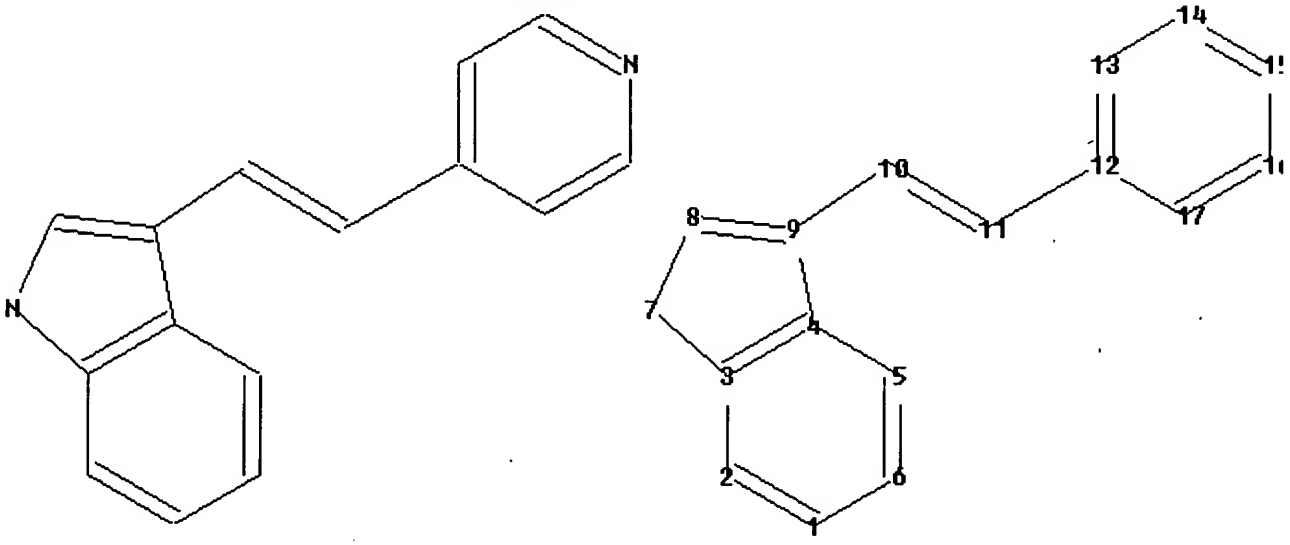

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ring nodes :
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chain bonds :
9-10 10-11 11-12

ring bonds :
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16-17
exact/norm bonds :
3-7 4-9 7-8 8-9
exact bonds :
9-10 10-11 11-12
normalized bonds :
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Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom

L1 STRUCTURE UPLOADED

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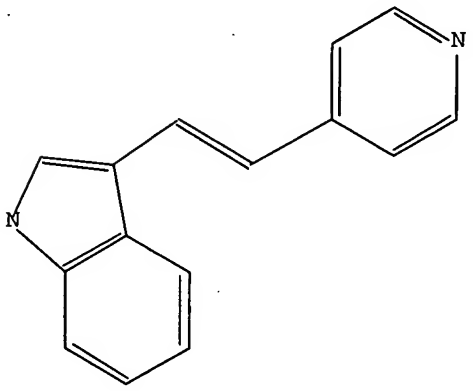
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> **s l1**
SAMPLE SEARCH INITIATED 16:07:16 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 313 TO ITERATE

100.0% PROCESSED 313 ITERATIONS 9 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 5199 TO 7321
PROJECTED ANSWERS: 9 TO 360

L2 9 SEA SSS SAM L1

=> **s l1 full**

```
FULL SEARCH INITIATED 16:07:20 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      6177 TO ITERATE

100.0% PROCESSED     6177 ITERATIONS                                  127 ANSWERS
SEARCH TIME: 00.00.01

L3          127 SEA SSS FUL L1

=> file medline, caplus, wpids, uspatfull
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   172.10     172.31

FILE 'MEDLINE' ENTERED AT 16:07:29 ON 26 JAN 2007

FILE 'CAPLUS' ENTERED AT 16:07:29 ON 26 JAN 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIDS' ENTERED AT 16:07:29 ON 26 JAN 2007
COPYRIGHT (C) 2007 THE THOMSON CORPORATION

FILE 'USPATFULL' ENTERED AT 16:07:29 ON 26 JAN 2007
CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

=> s l3
SAMPLE SEARCH INITIATED 16:07:35 FILE 'WPIDS'
SAMPLE SCREEN SEARCH COMPLETED -       11 TO ITERATE

100.0% PROCESSED       11 ITERATIONS                                   0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:           11 TO      209
PROJECTED ANSWERS:               0 TO        0

L4          95 L3

=> s l4 and "cell proliferation"
L5           1 L4 AND "CELL PROLIFERATION"

=> d 15 ibib, abs

L5   ANSWER 1 OF 1     MEDLINE on STN
ACCESSION NUMBER:   2006351356     MEDLINE  Full-text
DOCUMENT NUMBER:    PubMed ID: 16766262
TITLE:              Attenuation of LDH-A expression uncovers a link between
                    glycolysis, mitochondrial physiology, and tumor
                    maintenance.
AUTHOR:             Fantin Valeria R; St-Pierre Julie; Leder Philip
CORPORATE SOURCE:   Department of Genetics, Harvard Medical School and Howard
                    Hughes Medical Institute, Boston, Massachusetts 02115, USA.
SOURCE:             Cancer cell, (2006 Jun) Vol. 9, No. 6, pp. 425-34.
                    Journal code: 101130617. ISSN: 1535-6108.
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals
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ENTRY MONTH: 200608
ENTRY DATE: Entered STN: 13 Jun 2006
Last Updated on STN: 10 Aug 2006
Entered Medline: 9 Aug 2006

AB Alterations in cellular metabolism are among the most consistent hallmarks of cancer. Herein we have investigated the relationship between increased aerobic lactate production and mitochondrial physiology in tumor cells. To diminish the ability of malignant cells to metabolize pyruvate to lactate, lactate dehydrogenase A (LDH-A) levels were knocked down by means of LDH-A short hairpin RNAs. Reduction in LDH-A activity resulted in stimulation of mitochondrial respiration and decrease of mitochondrial membrane potential. It also compromised the ability of these tumor cells to proliferate under hypoxia. The tumorigenicity of the LDH-A-deficient cells was severely diminished, and this phenotype was reversed by complementation with the human ortholog LDH-A protein. These results demonstrate that LDH-A plays a key role in tumor maintenance.

=> **d his**

(FILE 'HOME' ENTERED AT 16:06:43 ON 26 JAN 2007)

FILE 'REGISTRY' ENTERED AT 16:06:55 ON 26 JAN 2007
L1 STRUCTURE UPLOADED
L2 9 S L1
L3 127 S L1 FULL

FILE 'MEDLINE, CAPLUS, WPIDS, USPATFULL' ENTERED AT 16:07:29 ON 26 JAN 2007
L4 95 S L3
L5 1 S L4 AND "CELL PROLIFERATION"

=> **s l4 and "differentiation"**
L6 0 L4 AND "DIFFERENTIATION"

=> **s l4 and "tumor"**
L7 5 L4 AND "TUMOR"

=> **d l7 1-5 ibib, abs, hitstr**

L7 ANSWER 1 OF 5 MEDLINE on STN
ACCESSION NUMBER: 2006351356 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 16766262
TITLE: Attenuation of LDH-A expression uncovers a link between glycolysis, mitochondrial physiology, and tumor maintenance.
AUTHOR: Fantin Valeria R; St-Pierre Julie; Leder Philip
CORPORATE SOURCE: Department of Genetics, Harvard Medical School and Howard Hughes Medical Institute, Boston, Massachusetts 02115, USA.
SOURCE: Cancer cell, (2006 Jun) Vol. 9, No. 6, pp. 425-34.
Journal code: 101130617. ISSN: 1535-6108.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200608
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AB Alterations in cellular metabolism are among the most consistent hallmarks of cancer. Herein we have investigated the relationship between increased aerobic lactate production and mitochondrial physiology in tumor cells. To diminish the ability of malignant cells to metabolize pyruvate to lactate, lactate dehydrogenase A (LDH-A) levels were knocked down by means of LDH-A short hairpin RNAs. Reduction in LDH-A activity resulted in stimulation of mitochondrial respiration and decrease of mitochondrial membrane potential. It also compromised the ability of these tumor cells to proliferate under hypoxia. The tumorigenicity of the LDH-A-deficient cells was severely diminished, and this phenotype was reversed by complementation with the human ortholog LDH-A protein. These results demonstrate that LDH-A plays a key role in tumor maintenance.

L7 ANSWER 2 OF 5 MEDLINE on STN
ACCESSION NUMBER: 2004029169 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 14729642
TITLE: F16, a mitochondriotoxic compound, triggers apoptosis or necrosis depending on the genetic background of the target carcinoma cell.
AUTHOR: Fantin Valeria R; Leder Philip
CORPORATE SOURCE: Department of Genetics, Harvard Medical School and Howard Hughes Medical Institute, Boston, Massachusetts 02115, USA.
SOURCE: Cancer research, (2004 Jan 1) Vol. 64, No. 1, pp. 329-36. Journal code: 2984705R. ISSN: 0008-5472.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200404
ENTRY DATE: Entered STN: 21 Jan 2004
Last Updated on STN: 2 Apr 2004
Entered Medline: 1 Apr 2004

AB Mutations that lead to the emergence of resistance to apoptosis are commonly observed among tumor cells. Some of the proteins affected are integral parts of the apoptotic cascade such as pro- and antiapoptotic members of the Bcl-2 family. F16 is a small molecule that accumulates in mitochondria of a variety of tumor cells and interferes with their physiological function. Because this interference ultimately triggers apoptosis in many affected cell lines, we examined the effect of antiapoptotic Bcl-2 overexpression on the response of cells to F16. Our results showed that high levels of Bcl-2 did not block the ability of F16 to induce cell death. However, unlike the apoptotic response that followed F16 treatment of cells with moderate Bcl-2 levels, cells resistant to a variety of apoptotic stimuli by virtue of Bcl-2 overexpression succumbed to F16 by necrosis. Thus, this dual ability of the mitochondriotoxic compound F16 to induce apoptosis and necrosis may represent an added advantage by expanding its spectrum of action toward genetically altered tumor cells incapable of apoptosis.

L7 ANSWER 3 OF 5 MEDLINE on STN
ACCESSION NUMBER: 2002401591 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 12150823
TITLE: A novel mitochondriotoxic small molecule that selectively inhibits tumor cell growth.
AUTHOR: Fantin Valeria R; Berardi Marcelo J; Scorrano Luca; Korsmeyer Stanley J; Leder Philip
CORPORATE SOURCE: Department of Genetics, Harvard Medical School, Boston, Massachusetts 02115, USA.

SOURCE: Cancer cell, (2002 Jul) Vol. 2, No. 1, pp. 29-42.
Journal code: 101130617. ISSN: 1535-6108.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200303
ENTRY DATE: Entered STN: 2 Aug 2002
Last Updated on STN: 26 Mar 2003
Entered Medline: 25 Mar 2003

AB Tumorigenesis results from events that impinge on a variety of collaborating metabolic pathways. To assess their role in this process, we utilized a cell-based assay to perform a high-throughput, chemical library screen. In so doing, we identified F16, a small molecule that selectively inhibits proliferation of mammary epithelial, neu-overexpressing cells, as well as a variety of mouse mammary tumor and human breast cancer cell lines. F16 belongs to a group of structurally similar molecules with a delocalized positive charge. The compound is accumulated in mitochondria of responsive cells, driven by the membrane potential, and it compromises their functional integrity. Mitochondrial hyperpolarization is a shared feature of many tumor cell lines, explaining the broad action spectrum of this novel delocalized lipophilic cation.

L7 ANSWER 4 OF 5 MEDLINE on STN
ACCESSION NUMBER: 2002401587 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 12150816
TITLE: A mitochondrial Achilles' heel in cancer?.
AUTHOR: Hockenbery David M
CORPORATE SOURCE: Fred Hutchinson Cancer Research Center, Seattle, Washington 98109, USA.. dhockenb@fhcrc.rog
SOURCE: Cancer cell, (2002 Jul) Vol. 2, No. 1, pp. 1-2.
Journal code: 101130617. ISSN: 1535-6108.
PUB. COUNTRY: United States
DOCUMENT TYPE: Commentary
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200303
ENTRY DATE: Entered STN: 2 Aug 2002
Last Updated on STN: 26 Mar 2003
Entered Medline: 25 Mar 2003

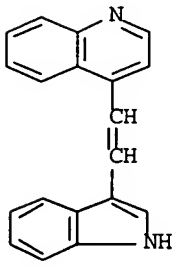
AB Mitochondria are principal actors in apoptosis as central hubs for diverse apoptotic signals. A new paper demonstrates the therapeutic potential of directly engaging these apoptotic pathways by identifying a mitochondrial toxin selective for tumor cells.

L7 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1965:416812 CAPLUS Full-text
DOCUMENT NUMBER: 63:16812
ORIGINAL REFERENCE NO.: 63:2952a-b
TITLE: Styrylquinoline analogs from heterocyclic carboxaldehydes
AUTHOR(S): Bahner, Carl Tabb; Kinder, Harold; Gutman, Lee
CORPORATE SOURCE: Carson-Newman Coll., Jefferson City, TN
SOURCE: Journal of Medicinal Chemistry (1965), 8(3), 397-8
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English

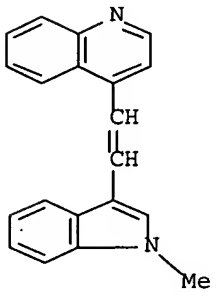
AB Indole-3-carboxaldehyde, pyridine-3-carboxaldehyde, thiophene-2-carboxaldehyde, and N-methyl-1,2,3,4-tetrahydroquinoline-6-carboxaldehyde were used to prepare a series of quinoline and isoquinoline derivs. which were studied for antitumor activity in relation to structure. 3-(3H-Indol-3-ylidenemethyl)indole, 2-methyl-3- [(2-methyl-3H-indol-3- ylidene)-methyl]indole, and 2-methyl-3-[1-(2-methyl-3H-indol-3-ylidene)- ethyl]indole showed greater antitumor activity against KB tumor cells than 2,2',2''-methylidynetris[3-methylindole], 3,3',3''- methylidynetriindole, or 3,3',3''-methylidynetris[2-methylindole]. The greater antitumor activity in the former group is believed to be due to the double bond joining the 2 ring systems.

IT 1586-46-5P, Quinoline, 4-(2-indol-3-ylvinyl)- 1586-49-8P , Quinoline, 4-[2-(1-methylindol-3-yl)vinyl]-
RL: PREP (Preparation)
(preparation of)

RN 1586-46-5 CAPLUS
CN Quinoline, 4-(2-indol-3-ylvinyl)- (7CI, 8CI) (CA INDEX NAME)



RN 1586-49-8 CAPLUS
CN Quinoline, 4-[2-(1-methylindol-3-yl)vinyl]- (7CI, 8CI) (CA INDEX NAME)



=> **d his**

(FILE 'HOME' ENTERED AT 16:06:43 ON 26 JAN 2007)

FILE 'REGISTRY' ENTERED AT 16:06:55 ON 26 JAN 2007

L1 STRUCTURE UPLOADED
L2 9 S L1
L3 127 S L1 FULL

FILE 'MEDLINE, CAPLUS, WPIDS, USPATFULL' ENTERED AT 16:07:29 ON 26 JAN 2007

L4 95 S L3
L5 1 S L4 AND "CELL PROLIFERATION"
L6 0 S L4 AND "DIFFERENTIATION"
L7 5 S L4 AND "TUMOR"

=> **s 14 and cancer**
L8 3 L4 AND CANCER

=> **d 18 1-3 ibib, abs, hitstr**
'HITSTR' IS NOT A VALID FORMAT FOR FILE 'MEDLINE'

ENTER DISPLAY FORMAT (BIB):ibib, abs

L8 ANSWER 1 OF 3 MEDLINE on STN
ACCESSION NUMBER: 2006351356 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 16766262
TITLE: Attenuation of LDH-A expression uncovers a link between glycolysis, mitochondrial physiology, and tumor maintenance.
AUTHOR: Fantin Valeria R; St-Pierre Julie; Leder Philip
CORPORATE SOURCE: Department of Genetics, Harvard Medical School and Howard Hughes Medical Institute, Boston, Massachusetts 02115, USA.
SOURCE: Cancer cell, (2006 Jun) Vol. 9, No. 6, pp. 425-34. Journal code: 101130617. ISSN: 1535-6108.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200608
ENTRY DATE: Entered STN: 13 Jun 2006
Last Updated on STN: 10 Aug 2006
Entered Medline: 9 Aug 2006

AB Alterations in cellular metabolism are among the most consistent hallmarks of cancer. Herein we have investigated the relationship between increased aerobic lactate production and mitochondrial physiology in tumor cells. To diminish the ability of malignant cells to metabolize pyruvate to lactate, lactate dehydrogenase A (LDH-A) levels were knocked down by means of LDH-A short hairpin RNAs. Reduction in LDH-A activity resulted in stimulation of mitochondrial respiration and decrease of mitochondrial membrane potential. It also compromised the ability of these tumor cells to proliferate under hypoxia. The tumorigenicity of the LDH-A-deficient cells was severely diminished, and this phenotype was reversed by complementation with the human ortholog LDH-A protein. These results demonstrate that LDH-A plays a key role in tumor maintenance.

L8 ANSWER 2 OF 3 MEDLINE on STN
ACCESSION NUMBER: 2002401591 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 12150823
TITLE: A novel mitochondriotoxic small molecule that selectively inhibits tumor cell growth.
AUTHOR: Fantin Valeria R; Berardi Marcelo J; Scorrano Luca; Korsmeyer Stanley J; Leder Philip
CORPORATE SOURCE: Department of Genetics, Harvard Medical School, Boston, Massachusetts 02115, USA.
SOURCE: Cancer cell, (2002 Jul) Vol. 2, No. 1, pp. 29-42. Journal code: 101130617. ISSN: 1535-6108.

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200303
ENTRY DATE: Entered STN: 2 Aug 2002
Last Updated on STN: 26 Mar 2003
Entered Medline: 25 Mar 2003

AB Tumorigenesis results from events that impinge on a variety of collaborating metabolic pathways. To assess their role in this process, we utilized a cell-based assay to perform a high-throughput, chemical library screen. In so doing, we identified F16, a small molecule that selectively inhibits proliferation of mammary epithelial, neu-overexpressing cells, as well as a variety of mouse mammary tumor and human breast cancer cell lines. F16 belongs to a group of structurally similar molecules with a delocalized positive charge. The compound is accumulated in mitochondria of responsive cells, driven by the membrane potential, and it compromises their functional integrity. Mitochondrial hyperpolarization is a shared feature of many tumor cell lines, explaining the broad action spectrum of this novel delocalized lipophilic cation.

L8 ANSWER 3 OF 3 MEDLINE on STN
ACCESSION NUMBER: 2002401587 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 12150816
TITLE: A mitochondrial Achilles' heel in cancer?.
AUTHOR: Hockenbery David M
CORPORATE SOURCE: Fred Hutchinson Cancer Research Center, Seattle, Washington 98109, USA.. dhockenb@fhcrc.rog
SOURCE: Cancer cell, (2002 Jul) Vol. 2, No. 1, pp. 1-2.
Journal code: 101130617. ISSN: 1535-6108.
PUB. COUNTRY: United States
DOCUMENT TYPE: Commentary
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200303
ENTRY DATE: Entered STN: 2 Aug 2002
Last Updated on STN: 26 Mar 2003
Entered Medline: 25 Mar 2003

AB Mitochondria are principal actors in apoptosis as central hubs for diverse apoptotic signals. A new paper demonstrates the therapeutic potential of directly engaging these apoptotic pathways by identifying a mitochondrial toxin selective for tumor cells.

=> **d his**

(FILE 'HOME' ENTERED AT 16:06:43 ON 26 JAN 2007)

FILE 'REGISTRY' ENTERED AT 16:06:55 ON 26 JAN 2007
L1 STRUCTURE UPLOADED
L2 9 S L1
L3 127 S L1 FULL

FILE 'MEDLINE, CAPLUS, WPIDS, USPATFULL' ENTERED AT 16:07:29 ON 26 JAN 2007
L4 95 S L3
L5 1 S L4 AND "CELL PROLIFERATION"
L6 0 S L4 AND "DIFFERENTIATION"

```
L7             5 S L4 AND "TUMOR"
L8             3 S L4 AND CANCER

=> s l4 and "cell death"
L9             1 L4 AND "CELL DEATH"

=> d l9 ibib, abs

L9   ANSWER 1 OF 1     MEDLINE on STN
ACCESSION NUMBER:   2004029169     MEDLINE  Full-text
DOCUMENT NUMBER:    PubMed ID: 14729642
TITLE:              F16, a mitochondriotoxic compound, triggers apoptosis or
                    necrosis depending on the genetic background of the target
                    carcinoma cell.
AUTHOR:             Fantin Valeria R; Leder Philip
CORPORATE SOURCE:   Department of Genetics, Harvard Medical School and Howard
                    Hughes Medical Institute, Boston, Massachusetts 02115, USA.
SOURCE:             Cancer research, (2004 Jan 1) Vol. 64, No. 1, pp. 329-36.
                    Journal code: 2984705R. ISSN: 0008-5472.
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals
ENTRY MONTH:        200404
ENTRY DATE:         Entered STN: 21 Jan 2004
                    Last Updated on STN: 2 Apr 2004
                    Entered Medline: 1 Apr 2004
AB    Mutations that lead to the emergence of resistance to apoptosis are commonly
      observed among tumor cells. Some of the proteins affected are integral parts
      of the apoptotic cascade such as pro- and antiapoptotic members of the Bcl-2
      family. F16 is a small molecule that accumulates in mitochondria of a variety
      of tumor cells and interferes with their physiological function. Because this
      interference ultimately triggers apoptosis in many affected cell lines, we
      examined the effect of antiapoptotic Bcl-2 overexpression on the response of
      cells to F16. Our results showed that high levels of Bcl-2 did not block the
      ability of F16 to induce cell death. However, unlike the apoptotic response
      that followed F16 treatment of cells with moderate Bcl-2 levels, cells
      resistant to a variety of apoptotic stimuli by virtue of Bcl-2 overexpression
      succumbed to F16 by necrosis. Thus, this dual ability of the
      mitochondriotoxic compound F16 to induce apoptosis and necrosis may represent
      an added advantage by expanding its spectrum of action toward genetically
      altered tumor cells incapable of apoptosis.


=> d his

     (FILE 'HOME' ENTERED AT 16:06:43 ON 26 JAN 2007)

     FILE 'REGISTRY' ENTERED AT 16:06:55 ON 26 JAN 2007
L1                STRUCTURE UPLOADED
L2             9 S L1
L3           127 S L1 FULL

     FILE 'MEDLINE, CAPLUS, WPIDS, USPATFULL' ENTERED AT 16:07:29 ON 26 JAN
     2007
L4            95 S L3
L5             1 S L4 AND "CELL PROLIFERATION"
L6             0 S L4 AND "DIFFERENTIATION"
```

```
L7              5 S L4 AND "TUMOR"
L8              3 S L4 AND CANCER
L9              1 S L4 AND "CELL DEATH"

=>

---Logging off of STN---


=>
Executing the logoff script...


=> LOG Y

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY    SESSION
FULL ESTIMATED COST                                    34.62     206.93

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -0.78      -0.78

STN INTERNATIONAL LOGOFF AT 16:11:33 ON 26 JAN 2007
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